

Docket No.: AB-209U

Amendments to the Specification:

Please replace paragraph [0012] with the following amended paragraph:

[0012] FIG. 1 is a perspective view of a microminiature infusion pump made in accordance with one embodiment of the invention[(:)]. This drawing and accompanying text include, without limitation, various means or portions of means for delivering at least one therapeutic substance and/or therapeutic electrical stimulation to a patient.

Please replace paragraph [0013] with the following amended paragraph:

[0013] FIG. 2A is a perspective view of an alternative embodiment of a microminiature infusion pump[(:)]. This drawing and accompanying text include, without limitation, various means or portions of means for delivering at least one therapeutic substance and/or therapeutic electrical stimulation to a patient.

Please replace paragraph [0014] with the following amended paragraph:

[0014] FIG. 2B is a view of one end of the infusion pump of FIG. 2A[(:)]. This drawing and accompanying text include, without limitation, various means or portions of means for delivering at least one therapeutic substance and/or therapeutic electrical stimulation to a patient.

Please replace paragraph [0015] with the following amended paragraph:

[0015] FIG. 3 is a side view of another embodiment of a microminiature infusion pump[(:)]. This drawing and accompanying text include, without limitation, various means or portions of means for delivering at least one therapeutic substance and/or therapeutic electrical stimulation to a patient.

Docket No.: AB-209U

Please replace paragraph [0016] with the following amended paragraph:

[0016] FIG. 4 is a side view of still another embodiment of a microminiature infusion pump[[:]]. This drawing and accompanying text include, without limitation, various means or portions of means for delivering at least one therapeutic substance and/or therapeutic electrical stimulation to a patient.

Please replace paragraph [0017] with the following amended paragraph:

[0017] FIG. 5A is a perspective view of a pancake-shaped embodiment of a microminiature device made in accordance with the invention[[:]]. This drawing and accompanying text include, without limitation, various means or portions of means for delivering at least one therapeutic substance and/or therapeutic electrical stimulation to a patient.

Please replace paragraph [0018] with the following amended paragraph:

[0018] FIG. 5B is a side view of the pancake-shaped embodiment of FIG. 5A[[:]]. This drawing and accompanying text include, without limitation, various means or portions of means for delivering at least one therapeutic substance and/or therapeutic electrical stimulation to a patient.

Please replace paragraph [0019] with the following amended paragraph:

[0019] FIG. 5C is a perspective view of a spherical embodiment of a microminiature device made in accordance with the invention[[:]]. This drawing and accompanying text include, without limitation, various means or portions of means for delivering at least one therapeutic substance and/or therapeutic electrical stimulation to a patient.

Please replace paragraph [0020] with the following amended paragraph:

[0020] FIG. 6 is a functional block diagram of a microminiature device made in accordance with the invention that includes both infusion and electrical stimulation

Docket No.: AB-209U

capabilities[;]. This drawing and accompanying text include, without limitation, various means or portions of means for delivering at least one therapeutic substance and/or therapeutic electrical stimulation to a patient and for providing power to these delivery means.

Please replace paragraph [0021] with the following amended paragraph:

[0021] FIG. 7 schematically depicts an alternative configuration of the reservoir used within the device of FIG. 6[; and]. This drawing and accompanying text include, without limitation, various means or portions of means for delivering at least one therapeutic substance to a patient.

Please replace paragraph [0022] with the following amended paragraph:

[0022] FIG. 8 depicts a system of implantable microdevices that communicate with each other and/or with external control/programming devices. This drawing and accompanying text include, without limitation, various means or portions of means for delivering at least one therapeutic substance and/or therapeutic electrical stimulation to a patient.

Please replace paragraph [0026] with the following amended paragraph:

[0026] The present invention is directed to means for delivering at least one therapeutic substance to a patient, the delivery means comprising a microminiature implantable infusion pump, such as the pump 10 shown in FIG. 1, or the infusion pumps 10', 10", 10"', 20, or 20' shown in FIGS. 2 through 6. Such pump(s) may be filled with a fluid 39 (FIG. 6) that consists of and/or contains a therapeutic substance(s) to be delivered to a patient. In some embodiments of this invention, such as implantable infusion pump 10" (FIG. 3), the pump is capable of supplying direct current (DC) or electric current pulses with means for delivering therapeutic electrical stimulation to the patient, wherein the stimulation means includes no less than two electrodes 14A and 14B and possesses one or more of the following properties:

Docket No.: AB-209U

Please replace paragraph [0043] with the following amended paragraph:

[0043] The dotted line 47 shown in FIG. 6 represents the boundaries of an ~~exemplary~~ exemplary hermetically-sealed case in which a control circuit 38, memory 36, pulse generator circuitry 45, power/data receiving circuit 42, and power source/storage 44 are housed. The large heavy dots on line 47 represent electrical feed-through connectors that allow electrical access into hermetically-sealed case 47. The dashed-dotted line 49 represents the boundaries of the entire microdevice 10", which contains other elements which may not necessarily be included within the hermetically-sealed portion 47. These elements include, e.g., an inductive coil 46 or the like for receiving and transmitting RF data and/or power (for instance, with inductive coils 48 or by other means of communication, such as an RF transmitter and receiver), a pump or other driver 30, a reservoir 40 for holding fluid 39 (e.g., a drug), tubing 41 connecting reservoir 40 with driver 30, tubing 34 connecting driver 30 with regulator 32 and/or non-occluding device 35, which non-occluding device 35 keeps the tubing 34 and regulator 32 free from occlusions. Depending upon the type of driver 30 used, portions thereof (e.g., electronic control circuits and/or elements) may also be included within the hermetically-sealed portion 47 of the device 10".

Please replace paragraph [0047] with the following amended paragraph:

[0047] The power source ~~[[of]]~~ used as a means for providing power to the implantable microdevice of the present invention may be realized using one or more of the following approaches, or other power source/storage options: